



RESPONSE UNDER 37 CFR 1.116
EXPEDITED PROCEDURE
EXAMINING GROUP 1711
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

MASAHIRO NOZAKI

CASE AD6506 US
NO.:

APPLICATION NO.: 09/180943

CONFIRMATION NO.: 9289

GROUP ART UNIT: 1711

EXAMINER: U. K. RAJGURU

FILED: NOVEMBER 18, 1998

FOR: AROMATIC POLYAMIDE RESIN COMPOSITION HAVING EXCELLENT
BALANCE OF TOUGHNESS AND STIFFNESS

RESPONSE AFTER FINAL REJECTION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Final Action dated February 26, 2003 in the above captioned matter, please consider the following remarks. A petition for a three month extension of time and a Notice of Appeal have been filed concurrently herewith.

The Examiner has rejected instant Claims 5-7 under 35 USC 103(a) as unpatentable, now over Hawley's condensed dictionary (12th edition, 1993, pages 491, 521 and 930) in view of previously applied references Weber et al (USP 5,710,216) and Paschke et al (USP 5,292,805). With the additional citation of Hawley's, the Examiner concludes that it would be obvious to those of skill in the art to prepare even a composition containing only the ingredients as claimed, in amounts either the same as or overlapping those claimed. The Examiner maintains this position, despite Applicant restricting the claim language to read "consisting of".

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Hawley's Condensed Dictionary discloses only the basic terms "polyamide," "filler," and "ethylene-propylene terpolymer." Moreover, Hawley's gives no motivation or suggestion to combine these ingredients into the composition of the present invention. As Hawley's dictionary fails to disclose the specific melting point, ratio of filler to impact modifier, and melt viscosity of the claimed compositions, it is an insufficient primary reference for such a rejection.

The secondary references do nothing to address the deficiencies of Hawley's. **Weber et al.** merely describe thermoplastic molding materials containing a partly aromatic copolyamide, a required polymethacrylamide, a required polymeric component having -OH groups, and, optionally, a fibrous or particulate filler and a rubber impact modifier (0 to 60 weight percent and 0 to 40 weight percent, respectively). Weber et al. suggests that the purpose of their invention is "to provide thermoplastic molding materials based on polyamides and *polymethacrylamides*" that do not have certain disadvantages (col. 1, lines 45-47) [emphasis added]. The polymeric component having -OH groups is present to improve compatibility between the polyamide and the polymethacrylamide. Thus, one skilled in the art would have no motivation to use the disclosure of Weber et al. to prepare a composition with an optimized balance of toughness and stiffness that contained only a filled, toughened polyamide that had no polymethacrylamide and polymeric component having -OH groups present.

While Weber et al. state that 0-60 weight percent of a filler and/or 0-40 weight percent of an impact modifier can be used, there is no suggestion that any particular ratio of filler to impact modifier will lead to an optimal combination of toughness and stiffness. In fact, since each of these ingredients is optional, the ranges given by Weber et al. would support a filler to toughener ratio of 0 to infinity; any ratio is possible. No further guidance is given to select where in that infinitely broad range one might look to optimize the toughness and stiffness of a blend that contains only a polyamide with a melting point of at least 290 °C, an inorganic filler, and an elastomer impact modifier as is currently claimed. The examples demonstrate physical properties that can be obtained by varying the polyamide and

the polymeric component having -OH groups used, but in no case do they teach how the physical properties of the compositions can be optimized by using certain ratios of a mineral filler to an impact modifier. In fact, none of the examples even includes a composition containing a mineral filler and no guidance is given elsewhere in the disclosure as to how one might optimally combine a mineral filler and impact modifier, while a single example demonstrates the use of a impact modifier in the absence of a mineral filler.

The Examiner has indicated that it would have been obvious from **Paschke** to vary the melt viscosity of the composition to set it to the claimed value in order to achieve ease in processing of that composition, and refers to melt viscosities listed in Table III, col. 11. However, the melt viscosities listed in Table III contain no units and hence the values listed are not instructive whatsoever; and it is impossible to know if they correspond to melt viscosities that are low enough to mold kitchen sinks or other large-scale molded objects, as is mentioned on page 6, lines 10-17 of the present application. Additionally, as the amounts of each of the four ingredients (polyphthalamide, polypropylene, carboxylated polypropylene, and glass fiber) given in Table III of Paschke varies in each of the examples, it is not possible to use the data given in the table to independently understand the effect on melt viscosity of the relative amounts of mineral filler and impact modifier alone. The changes or lack thereof seen in the melt viscosities of the compositions of the examples could have resulted from the varied amounts of any of the ingredients. Thus, it would not be obvious to use the data given in Pashcke et al. to vary the melt viscosity of the presently claimed invention to give compositions that have sufficient ease of processability.

There have been substantial discussions to date with the Examiner, regarding Weber et al and Paschke et al (and now the Hawley's citation). Simply put, Claims 5-7 as amended, and particularly in view of Applicant's earlier concession with the transition language "consisting of", are in no way made obvious over these references. This is because the specific limitations of these claims cannot be considered obvious in view of general teachings in this combination of references.

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Applicant strongly urges the Examiner to reconsider his position and allow the instant claims.

Respectfully submitted,



WILLIAM H. HAMBY

ATTORNEY FOR APPLICANT

Registration No.: 31,521

Telephone: (302) 992-3230

Facsimile: (302) 992-3257

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